

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: **Buchardt, *et al.***

Confirmation No.: **5682**

Serial No.: **10/691,012**

Group Art Unit: 1631

Filing Date: **October 22, 2003**

Examiner: **Michael L. Borin**

For: **Peptide Nucleic Acids**

Mail Stop Appeal-Brief Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

SUPPLEMENTAL APPELLANT'S BRIEF PURSUANT TO 37 C.F.R. § 41.37

This supplemental document is being filed in support of Appellant's appeal from the rejections of claims 34-36, 38-41, 43-45, and 47-73 dated November 6, 2008. A Notice of Appeal was filed on February 19, 2009 and an Appeal Brief was filed on April 3, 2009. A Notice of Non-Compliant Appeal Brief was mailed on May 7, 2009 alleging defects in the Status of Claims and the Summary of Claimed Subject Matter. The notification stated that the entire brief need not be resubmitted. As such, revised Sections 3 and 5 are submitted herein and supersede the previously filed sections.

3. STATUS OF CLAIMS

Rejected: Claims 34-36, 38-41, 43-45, and 47-73

Allowed: None

Withdrawn: None

Objected to: None

Canceled: Claims 1-33, 37, 42, and 46

Appealed: Claims 34-36, 38-41, 43-45, and 47-73. A listing of the claims involved in the Appeal are listed in the appendix entitled CLAIMS APPENDIX.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The following summary is for the purpose of complying with the provisions of 37 CFR 41.37(c)(1)(v). The subject matter of independent claims 34, 41, 48, 58, and 65 are summarized below. The entire disclosure, however, should be reviewed to obtain a complete understanding of the claim language.

The present invention concerns methods of *in vivo* treatment of living cells by extracellularly administering to the cells a polyamide nucleic acid oligomer containing neutral amide backbone linkages which is complementary to a target nucleic acid (**Claim 34**, page 17, line 28 to page 19, line 3). The administration is performed under conditions where the oligomer engenders a biological response associated with the target in a sequence specific manner. *Id.* The methods can comprise additionally detecting the biological response (**Claim 41**, page 18, lines 4-6). The invention also concerns methods where the oligomer engenders a biological response associated with the target in a sequence specific manner (**Claim 48**, page 17, line 28 to page 19, line 3). Another aspect of the invention relates to methods where and where the oligomer engenders a biological response associated with the target in a sequence specific manner such a response is detected (**Claim 58**, page 18, lines 4-6). An additional aspect of the invention concerns methods comprising administering to a organism a polyamide nucleic acid oligomer that contains neutral amide backbone linkages and is complementary to a target nucleic acid, under conditions wherein the oligomer specifically binds to DNA or RNA deriving from a gene in the organism (**Claim 65**, page 17, line 28 to page 19, line 3).

Respectfully submitted,

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